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ABSTRACT

Theories concerning the organizational dynamics underlying the dispersion of institutional research activities within colleges are proposed. Two theoretical arguments concern whether or not a centralized, monopolistic institutional research office will be found on a given campus: the informational legitimacy argument and the limited attention argument. Each reflects on the often unmanageable connections between information and power in organizations. The third theoretical argument, the organizational contingency argument, concerns the nature of fragmentation on a given campus. This argument suggests that the particular trajectory of institutional research fragmentation on a campus depends on specific organizational conditions on that campus, as well as on external forces. The applicability of the theoretical perspective is considered, based on a case study analysis of the University of Minnesota. Informational legitimacy was found to be a factor in the fragmentation of institutional research, and limits on attention at the central level were also active in fragmentation. Forces that seem to be active in fragmentation include: the external environment, personalities and career paths, management styles, and power arrangements. (SW)

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The Organizational Ecology of Institutional Research: An Exploration of the Factors Behind the Fragmentation of the Institutional Research Enterprise*

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Ann K. Dickey, Chair
Forum Publications Editorial
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The Organizational Ecology of Institutional Research: An Exploration of the Factors Behind the Fragmentation of the Institutional Research Enterprise

Abstract

In this paper we propose a theoretical perspective which may be helpful in understanding the organizational dynamics underlying the dispersion of institutional research activities within institutions. Two of our theoretical arguments relate to whether or not a centralized, monopolistic institutional research office will be found on a given campus: the informational legitimacy argument and the limited attention argument. Each reflects upon the often unmanageable connections between information and power in organizations. Our third theoretical argument, the organizational contingency argument, relates to the exact nature of fragmentation on a given campus. This argument suggests that the particular trajectory of institutional research fragmentation on a campus depends upon specific organizational conditions on that campus, as well as upon external forces. The findings of a preliminary study in a selected research university generally support the applicability of the theoretical perspective.

The Organizational Ecology of Institutional Research:

An Exploration of the Factors Behind

the Fragmentation of the Institutional Research Enterprise

The centralization of institutional research on a campus can be defended in innumerable ways, each of them clear and seemingly rational. Centralization can reduce duplication, threats to data privacy, data storage costs, programming expenses, training costs, misunderstandings of data characteristics, and so forth. Peterson and Corcoran (1985) have suggested, however, that the institutional research function is fragmenting on many campuses. Increasingly, the popularly idealized model of a college's institutional research being conducted out of a single, centralized office is being violated. In its place is emerging a far more differentiated and complex reality, with institutional research being conducted by a wide range of offices for a wide range of purposes. Although these activities often are organized under other labels, such as planning, evaluation, and forecasting, there is little basis for distinguishing them from the activities of traditional, centralized institutional research offices.[1]

These trends form the backdrop for the present paper. In it, fragmentation is first considered from a theoretical perspective. Next, an initial case study analysis of institutional research fragmentation at a large urban research university is presented and discussed.

Theoretical Perspective

This paper's theoretical approach may be divided into two parts. The first deals with the question of whether institutional research fragmentation will occur on a given campus. We argue that institutional research will exist

comfortably at the central level alone if and only if 1) central office research claims are accepted as legitimate by others on a campus, and 2) central office research time and resources are available for all institutional research needs perceived to be significant on a campus. We label these two arguments the informational legitimacy argument and the limited attention argument, respectively. It is our contention that these two criteria for central office hegemony over the institutional research function are rarely met, and can only rarely be reasonably expected to be met. What is more, we believe that the emergence of institutional research in an increasing variety of offices on campuses is a natural, unavoidable, and probably healthy phenomenon of organizational life. Because we believe that the conditions for institutional research fragmentation are emerging on many campuses, the two arguments above address indirectly the question of why institutional research fragmentation seems to many observers to be a growing phenomenon (see Schmidtlein, 1985; Peterson, 1985). The second part of our theoretical approach deals with how fragmentation will occur on a given campus, given that the conditions for it are present. We argue that the nature of institutional research decentralization[2] in a given institution is not wholly predetermined by external forces but instead will depend in part upon a variety of organizational factors distinctive to that institution. We label this argument the organizational contingency argument. Our three arguments are addressed in more detail below.

Organizational Conditions Leading to Fragmentation: The connections between power[3] and information appear to be central to answering the question of whether or not institutional research fragmentation will occur on a given campus. We contend that the complexities of those connections on American campuses preclude

the undisputed establishment and maintenance of a monopolistic, centralized institutional research office. Power can be a "wild card" in organizations, defying such seemingly rational understandings and practices as centralized research offices (see Pfeffer, 1981). Similarly, information is a resource with some uniquely disorderly characteristics (Wilensky, 1969; Wildavsky, 1983). The connections between these two factors can therefore be somewhat difficult to manage. That unmanageability is at the heart of our first two arguments.

We shall discuss the informational legitimacy argument first. Like acquiring money, acquiring information entails costs, and like having money, having information can provide power. A monopoly on a critical piece of information is a claim on power (Wilensky, 1969; Forester, 1982). Yet, unlike money, information can be shared with others, reinterpreted by others, recast by others, refuted by others, or even recreated by others, without its necessary outright loss to the original owner. Money is a clearcut resource for organizational and individual transactions. Information can be a problematic resource: it mutates, multiplies, and regenerates in sometimes uncontrollable ways.[4] Making an information claim may lead only to others making counter-claims, rather than to quiet acceptance of the claims. Thus, the legitimacy of central management claims based on organizational information can be challenged. This reasoning is central to our "informational legitimacy" argument.[5]

The argument views institutional research as an aspect of organizational self-evaluation. In any organization, self-evaluation is inextricably linked to considerations of politics and power in that organization (see Wildavsky, 1980; Weiss, 1973). Because of their professionalized staffs and loosely-coupled units and processes, academic organizations may be particularly prone to power struggles over goals and resource allocations (Baldridge et al., 1977;

Weick, 1978), and these stuggles unquestionably affect internal evaluations of performance. In other words, performance evaluations cannot be totally decoupled from arguments over appropriate goal priorities and resource allocations (Lasher and Firnberg, 1983; Alpert, 1985; Schmidtlein, 1985). Because the various units on a campus can comprise interest groups competing over organizational goals and resources, they are likely to proffer differing evaluations of organizational performance, and differing views regarding the legitimacy of information on a particular phenomenon (Tetlow, 1983).[6] This tendency can be likened to the proliferation of alternative visions of "reality" proposed by competing lobbying groups when the U.S. Congress considers legislation on a social issue. In Washington, a capability to conduct policy research can translate into a capability to affect policy. In similar fashion, a capability to conduct institutional research in a campus unit can potentially translate into a degree of power in determining institutional directions.

The unruly connections between information and power are also at the heart of the limited attention argument. Obtaining and having information can have extraordinarily high costs. Academic institutions, like any organization, must apportion their limited resources according to dominant perceptions of organizational needs. At the central level, having some kinds of information may be seen as desirable by institutional leaders, but obtaining that information may be viewed as a less cost-effective use of central administration resources than other uses. Similarly, the carrying costs of certain information may lead central leaders to avoid its collection. For example, some administrators may prefer not to learn the comparative salary data for whites and minorities on their campuses, in order to avoid the charge of not having acted upon known inequities. Such reluctance to learn would not be duplicated

by the parties on campus perceiving a need for redress, however. The inevitable limits on central administration attention to staff's perceived needs for research form the basis of our "limited attention" argument. The argument thus involves the costs and benefits associated with competing information needs.

Some examples may be helpful here. Academic departments on a campus often perceive a need to conduct environmentally oriented research in order to adapt to their external environments (e.g., emerging student clienteles and their needs[7]). Similarly, departments may perceive a need to conduct research to address structural dilemmas, such as a developing imbalance in individual responsibilities within the department. Certain organizational processes may even demand immediate attention at the local level. For example, registration processes in a college within a large university may slow alarmingly. Such dilemmas may be imperative focuses of attention at localized sites on campus, but may claim low priority for centralized institutional research attention, particularly within central administrations pressed by the demands of trustees and legislators. In sum, there is little likelihood that central institutional research offices, as they are usually staffed and managed, can pay full attention to the specific needs of all units on a complex campus.

One might argue that the limited attention and informational legitimacy arguments have become active factors in institutional research fragmentation largely because of recent resource and accountability challenges on campus. Clearly an environment of open-ended resource increases would generate fewer debates over "informational legitimacy." Nevertheless, the dynamics of fragmentation may have deeper roots. The two core arguments above might be put into a series of epigrams along the following lines: "information is debatable," "resources are limited," and "internal priorities differ." These ideas are

central to the "bounded rationality" school of thought in organization theory. Since the 1950's analysts of that school have studied the limits to organizational rationality imposed by information and power concerns (e.g., see Simon, 1979). In a higher education application of the ideas of bounded rationality, Cohen and March (1974) found that vague goals and responsibilities, along with the poorly understood character of the educational process, contribute to the proliferation of widely varying interpretations and "solutions" in American universities. The conditions of scarcity and conflict currently present on many American campuses may simply be exacerbating a condition (fragmentation) rooted in fundamental limits to organizational rationality.[8]

How Will Fragmentation Proceed?: If it is indeed true that the conditions for institutional research fragmentation hold on increasing numbers of campuses, some important questions follow. What are the implications of fragmentation for institutional effectiveness? What forms is it likely to take on a given campus? Can the process and nature of fragmentation be managed? It is here that our third argument, the organizational contingency argument, comes into play. That argument asserts that the directions, extent, and timing of fragmentation on a particular campus will depend strongly upon the specific characteristics of the institution, as well as upon broader economic, social, and demographic factors.

This argument reflects one of the more striking developments of late twentieth-century management theory: the growing theoretical power of the statement, "It all depends" (Perrow, 1979). Prior to the 1950s, the straightforward axioms of the "scientific management" and "human relations" schools dominated the field: good managers were never to have more than six people reporting to them, were always to allow active employee participation in

key decisions, and so forth. Doubts about the value of these axioms for all organizations and all situations emerged in the 1950s, however. A new set of ideas, often labeled "contingency theory," emerged. Since tasks, staff, structures, environments, and technologies vary widely across and even within organizations, approaches that work in one context might well not work in another. In a broader sense, the forces at work in one organization may be absent in another. This line of thinking seems to hold particular relevance for higher education. Higher education institutions differ remarkably among themselves (Clark, 1983; Birnbaum, 1983; Baldridge et al., 1978). Even so benign a statement as "Demographics are threatening American higher education" must be heavily qualified, depending on the campus context. External forces cannot be assumed to affect all institutions identically, even within one of the familiar categories of postsecondary institutions (e.g., research universities, liberal arts colleges). Personalities, past histories, structures, and so forth intrude idiosyncratically into institutional change processes, and play critical roles in organizational adaptation.

For these reasons, it is doubtful that overarching "laws" about the trajectory of institutional research fragmentation on a given campus can be constructed at the present time. The development is so new, and the organizational universe so great, that specified theory development must await the accumulation of initial "grounded" information on change (see Conrad, 1978). Our third theoretical argument, the organizational contingency argument, is therefore rather open-ended, befitting the preliminary state of knowledge on the subject: the nature of institutional research fragmentation on a given campus will depend intimately upon both the external environment of the institution and its distinctive tasks, staff, resources, structures, and culture.

Research Design

In the pages that follow, we present some preliminary case study results bearing on the appropriateness of our three theoretical arguments to the actual contexts of contemporary institutional research.[9] The plan for the study involved two basic design decisions. First, we decided to focus on a single institution with which we both were familiar, the University of Minnesota.[10] Second, we decided to identify certain key actors in institutional research at the institution, question them in a semi-structured interview format, provide them with opportunities for substantive feedback on our initial conclusions, and base our final conclusions on both rounds of information-gathering. The implementation of these two decisions is described in detail below.

The decision to use a qualitative procedure for the analysis is consistent with the tentative theoretical ideas we proposed to investigate. The approach is an attractive one in the early stages of theory development regarding organizational change, especially when the need is great for seeing the inter-relatedness of various events and patterns, rather than for understanding the details of particular discrete phenomena (Mintzberg, 1983b). The special strength of qualitative, case study methodology is its sensitivity to individual situations, patterns of relationships, contexts, and natural environments in organizations (Stake, 1978; Van Maanen, 1983).

On the other hand, two notable potential weaknesses of such an approach should be noted. The first is the potential for such an analysis to produce in the end "an incoherent, bulky, irrelevant, meaningless set of obervations" (Miles, 1983). We sought to avoid this problem by imposing a rough working theoretical framework prior to entering the analysis stage. The second potential weakness lies in the possibility of bias in the selection of subjects and conduct of data gathering and analysis. We sought to minimize this

potential by seeking (both from others and from ourselves) ongoing criticism of our procedures and interpretations.

The authors' familiarity with the University of Minnesota as a case setting may be seen as either a strength or weakness of the present study. Whatever its other benefits and costs, that familiarity provided the basis for knowledgable selection of sources of information about institutional research on the campus. On that basis, we chose to interview seven very well-informed individuals who, as participants in institutional research on campus for the last 10 to 15 years, could provide observations from a variety of perspectives. Three of the seven individuals interviewed had experience primarily at the level of central administration. These three each had served in a different part of the central administration, however. One was located in the central student affairs office, one in the all-University information services office, and one in the academic affairs office. The remaining four respondents came from collegiate units or groups of collegiate units. One of those units is located on a physically separate campus.

The interview plan, as mentioned above, involved two distinct stages. In the first stage, the interviews solicited respondents' observations on changes in institutional research practice and their assessments of how and why these changes occurred. As interviewers, we avoided questions based overtly in our specific preliminary hypotheses. Instead, we pursued a semi-structured series of open-ended questions, and encouraged all responses. We introduced the interview by stating that we were interviewing individuals who had had the opportunity to observe changes in institutional research practice since about 1970. We expressed special interest in those changes relating to the development of institutional research capability in colleges and other

non-central units.

The interview was divided into several sections, organized around the following general questions:

a. "When were institutional research activities initiated in your unit? By whom? What led to this action? How was it done? What were the staffing levels and primary activities in the early years?"

b. "What changes occurred in the unit's institutional research activities over time? What led to these changes? How were they accomplished? What were the staffing implications? How did the mix of activities change?"

c. "How does the development of this unit's institutional research activity compare to that in comparable units within the University? What are some significant differences, and how and why did these arise?"

The initial interview concluded with a reminder that a draft of initial findings would be circulated later to the respondents, and each of them would be given a chance to comment upon (and correct as necessary) that draft prior to its public release. The reactions and observations of respondents were then incorporated as appropriate into the draft text.

Results

Several forces seem to be active in the fragmentation of institutional research at the University of Minnesota. The case study data we explored suggest general support for our theoretical approach, but add appreciably to its

breadth. Below, the dominant themes emerging from our case study analysis are highlighted within the framework of our three core arguments.

The Informational Legitimacy Argument: Since the early 1970s, the struggle over resources at this financially-pressed university has frequently been played out through a dialogue of opposing data claims. Responses to central administration retrenchment plans have often taken the form of reinterpretations or enhancements of college-level data provided by central institutional research staff. Perhaps just as frequently, central institutional research staff have been called upon to critically assess the accuracy of data claims initiated by college-level officials. Have enrollments in College X truly declined in the past three years? Are faculty workloads really decreasing in College Y? As expected on the basis of the informational legitimacy argument, these kinds of researchable questions have been critically addressed by multiple parties with relatively high stakes involved. Further support for the argument has come from those parts of the University whose faculty and staff are unionized. The onset of unionization in those units was in effect an onset of "bureaucratized conflict" (Baldridge et al., 1977; 1978). A dialogue of conflicting data claims was newly grafted onto existing organizational structures and procedures, and that dialogue's continuation was assured for the indefinite future.

The Limited Attention Argument: Student services, institutional research and other traditional central administrative functions have not been spared from the effects of retrenchment at the University. Ironically, at the very time data and analytic demands on these units have been rising due to increased accountability pressures, their resources for meeting those demands have been imperiled and, in some cases, cut significantly. Matross (1985) and Matross and Delmont (1982) have written earlier on creative approaches to dealing with this

difficult context at the University, and it was no surprise to us to find units in the University's individual colleges taking on activities that might formerly have been lodged at the central level. The health sciences unit provides a clear example. Facing strong accountability pressures from various public and private agencies, and manifesting a growing need for data to support various external funding bids, the health sciences unit developed a major in-house institutional research capability.

The Organizational Contingency Argument: What can be said about the particular nature of institutional research fragmentation at the University of Minnesota? Six general forces seem to be at work:

1) The External Environment: Political, economic, legal and demographic factors have been influential in fragmentation at the University. The evidence suggests that those units which face ongoing and highly resource-significant interactions with external agencies (e.g., federal agencies, accrediting groups, foundations, legislatures), or which are highly dependent on distinctive forms of environmental monitoring for success, may be especially likely to establish a unit-specific institutional research office. The health sciences unit at the University of Minnesota provided one example, but other units with heavy reliance on external research and program support, certified training programs, or unusual enrollment sources seem likely to develop an in-house institutional research capability showing a clear orientation to the external environment.

2) Personalities and Career Paths: Several of the respondents interviewed reported that individual interests and careers have shaped much of the fragmentation of institutional research at the University. When institutional research staff have gone on to other posts in the institution, they have often taken with them certain roles and tasks formerly associated with their institutional research positions. One individual who had moved on to a more generic, higher-level position in the University suggested that the institutional research orientation persists strongly among former institutional research staff because of their unique interests and expertise.

3) Management Styles: Different managers take different approaches to their decision-making responsibilities. Some tend to rely heavily on data and "objective" approaches, whereas others turn more to politicized or personalized approaches. Of those leaders who accept the institutional research approach, some tend to place the institutional research role in a staff context, whereas others build it into line functions. Some show a willingness to accept data provided centrally somewhat passively, whereas others act more forcefully, treating information as an acquirable, malleable resource with costs and benefits attached. Differences in management style are not always due to differences in personality or career patterns. Certain units (and disciplines) have histories of quantitative empiricism that may make the institutional research approach more compatible and traditional. The College of Education at the University provides a good example. Overall, whatever their source, these differences in management style

seem to account for several of the specific kinds of decentralization occurring at the University of Minnesota.

4) Power Arrangements: Certain elements of institutional research fragmentation at the University seem almost unavoidable, given the power arrangements of the institution and its units. The existence of unions in certain parts of the University but not others modified the institutional research function in those units, as suggested earlier. This pattern parallels the limited attention argument, and provides a specific example of its implications at the unit level. Also, as one respondent commented, the lack of a clearly disinterested executive vice president since about 1972 contributed to the growth of competing analyses. Similarly, resource shortages in certain colleges demanded self-interested self-evaluation within those units, not only to counter any arguably inappropriate centralized information about those units (paralleling the informational legitimacy argument), but also to construct plans for attractive scaled-down futures within those units. In the era of retrenchment and demographic threats, many unit leaders (especially deans and department chairs) have had to become familiar with institutional research approaches, for both offensive and defensive reasons. One respondent from a threatened unit commented that institutional research has increasingly become "everybody's business."[11]

5) Telecommunications: A general consensus among respondents supported the view that more and better information can help lead to better decisions. Since the micro-computer and other technical innovations have made possible easier access to information at all levels of the

organization, leaders at all levels have increasingly made use of the new information to aid their decisions. Analyses that were formerly impossible or prohibitively expensive became possible and affordable, and decentralized institutional research activity multiplied.

6) Structural/Procedural Arrangements: As in any large institution, there exist within the University of Minnesota sub-units with unique structures. The academic calendar varies remarkably across units. Some units adopt the University's standardized accounting and enrollment counting procedures only for beyond-unit reports, while maintaining some reliance on individualized systems for their own unit's purposes. Some units are unionized and others are not. Regardless of the power implications of these differences, they imply unique institutional research needs within units, and these unique institutional research needs, in turn, often require unit-based institutional research capabilities, given the constraints on full central-administration attention to unit-generated institutional research needs.

The six forces outlined above generally support the organizational contingency argument. Units' distinctive capabilities, personalities, environments, traditions, structures, and tasks seem closely related to the likelihood of their initiating their own institutional research operations. More striking, however, is the apparent degree to which several of the six themes follow directly from the informational legitimacy and limited attention arguments. Those units with unique threats to their resources tended to initiate in-house institutional research capability.[12] Similarly, those units

with unique structural needs tended to initiate in-house institutional research capability.

Summary: The evidence uncovered at the University of Minnesota suggests that informational legitimacy has indeed been a factor in the fragmentation of institutional research there. Power and political considerations have been attached to information claims and have promoted opposing claims. A second factor, limits on attention at the central level, has also been active in fragmentation, as expected. Units with special information needs have often met those needs through the initiation and maintenance of in-house institutional research capacity. On the question of the specific nature of fragmentation at the University, six forces seem to be active: the external environment, personalities and career paths, management styles, power arrangements, telecommunications, and structural/procedural arrangements. As was initially hypothesized, these forces reflect a blend of external and internal influences at the University, and that blend has produced a pattern of fragmentation uniquely adapted to the institution's situation.

Discussion

If it has met its objectives, the analysis reported above accurately reflects forces at work in the fragmentation of institutional research at one large institution. At best, however, this analysis will still be limited by its attention to only one setting. The information and interpretations suggested by the study may correspond only poorly to those of a similar analysis conducted at another institution. Given this significant limitation of the "data" for the study, the most beneficial of the feasible outcomes of the analysis may well be the prompting of practically and theoretically productive

dialogue on fragmentation and its causes.

With that as our goal, we offer three speculations on the meanings of our results. First, nothing in our study findings denies the hypothesized significance of power in the fragmentation of institutional research, but the nature of power's influence appears multifold. As expected, we found power being expressed in a substantive, predictable way in debates over organizational conditions. Information about conditions was produced by varying parties, and institutional research capability translated into capability to participate in the debate over resources and priorities. In this way, our results fit earlier "political" perspectives on the institutional research function, such as Schmidtlein's (1985) suggestion that the specific location of institutional research in the organizational structure is a key indication of institutional power structure (also see the views of Baldridge et al., 1978, on the rising importance of technical staff in understanding and defending competing interests in higher education). Our results also fit political perspectives on organizational information in general (e.g., see Pfeffer's 1981 discussion of the significance of the gatekeeper/communicator role in information networks within organizations).

The results may, in addition, uphold a less traditional view of the role of power in the institutional research function, however. Feldman and March (1981) have written on the symbolic role of information in organizational power structures. Adopting their perspective, one might view the fragmentation of institutional research as being at least partly a matter of increasing numbers of units entering into symbolic participation in the organizational debate. The following excerpt from the Feldman and March article (1981, page 182) provides a flavor of their views:

> The gathering of information provides a ritualistic assurance that appropriate attitudes about decision making exist . . . information is not simply a basis for action. It is a representation of competence and a reaffirmation of social virtue . . . information use symbolizes a commitment to rational choice. Displaying the symbol reaffirms the importance of this social value and signals personal and organizational competence.

The Feldman and March view raises an intriguing question: is the fragmentation of institutional research activities a sign of spreading symbolic entrance into debates over goals and resources, as well as a sign of a widening and better-informed dialogue over substantive institutional issues?[13] Some of our respondents mentioned the necessity of institutional research in the current fiscal environment of the institution, but expressed frustration over its limited influence on policy discussions. Perhaps one resolution of the seeming contradiction lies in understanding the symbolic value of institutional research in the institutional culture.

Our second speculation is that individual influences on fragmentation are quite important, and are important in both a within-unit and across-unit sense. Within a campus unit, the development of institutional research capability seems to depend significantly upon the personality and leadership style of key staff in that unit, including the unit dean, director, or chair.[14] Also, individual influences can spread across units. The findings of the study suggested strongly that, as institutional researchers change positions within the organization (often moving upward in the hierarchy), they bring their commitment to the activity with them. This circulation of personnel inside the organization, combined with the persistence of routines within units over time, may lead to increasing numbers of units initiating and maintaining the institutional research function. This across-unit aspect of institutional change processes seems to support the view of March (1981) that contagion and regeneration are important demographic factors in organizational change.

Future research should nevertheless include more detailed examination of the distribution of institutional research efforts across units. The authors were surprised by the absence of institutional research efforts in certain colleges where the requisite skills and experience were readily available in the faculty and administrative pool. Perhaps the interaction of resource needs and skill levels within units works in more complex fashion than was at first suspected.[15]

The third and final speculation we present is perhaps most fundamental to the practice of institutional research: although the negative implications of fragmentation are real and immediate, it is not only likely to continue in most institutions but also likely to produce organizational benefits. Schmidtlein (1985) has written perceptively on the potential dangers of institutional research dispersion, including duplication of functions, loss of campus-wide mission and control, and disruptive competition. Similarly, Peterson (1985) has expressed concerns over fragmentation's professional implications. Yet there are likely rewards to organizational "freedom of information." The dispersion of institutional researchers to various parts of institutions implies a dispersion of sources and controllers of information throughout the institution. According to some organizational researchers, this process may provide a critical impetus for improving organizational efficiency and effectiveness.

Analysts of this school of thought believe the struggle over resources in organizations resembles an economic market, and argue that the most efficient allocation of resources may be that provided by a system in which all parties to the struggle have equitable access to the fundamental weapon of fair discourse (and fair markets), namely information on the subject at hand. Pfeffer (1981) has argued that the notion of organizations as quasi-markets leads to two implications for organizational design:

> Make information available to all participants, so that the market for power and control can work more efficiently; and keep power and control relatively decentralized and diffuse, so that no single organizational actor or set of actors dominate[s] the firm and [can] therefore institutionalize control and delimit the operation of political contests within the organization (Pfeffer, 1981, page 360).

According to Pfeffer, these two suggestions violate conventional organizational design wisdom:

> For instance, the centralization of information that sometimes occurs in a multidivisional form can act to insulate those at the top of the organization from criticism and review of their decisions (ibid.).

Along the lines of the Pfeffer analysis, Carol Weiss (1975) has suggested that there are three primary values of information in organizations: warning, guidance, and reorientation. Perhaps the last value, that of reorienting organizational directions, is a prime virtue of the fragmentation of institutional research. A true marketplace of ideas and information may foster thoughtful, open development of strategic orientation in an institution.

A caveat must surely be attached to this notion, however. A number of recent analysts have lamented the explosion of information demands on campuses, and the growing difficulties of conducting truly substantive evaluation on campuses (David J. Berg, personal communication, 1984; Chronicle of Higher Education, 1985; Commission to Reassess the Purposes and Objectives of the Association, 1984). Similar observations have been made regarding other non-profit settings (Wildavsky, 1983). Among the potential dangers of all markets is the lack of central control over "value." Any "marketplace" ideal for institutional research must include consideration of the possible profusion of duplicative, irrelevant, or incorrect (i.e., low-value) information.

Footnotes

1. For example, because of the highly politicized struggles for scarce resources taking place on many campuses (see Mortimer and Tierney, 1979), cost-oriented research is being conducted under a variety of labels in a variety of sectors of campus administration, including business offices, academic department offices, and student affairs offices.

2. For the purposes of this paper the terms "decentralization" and "fragmentation" are used synonomously. This is solely a convenience. Fragmentation as a concept should be seen as encompassing not only formal decentralization of responsibilities but also informal or emergent assumptions of new responsibilities by non-central offices.

3. Defining "power" continues to be one of the most difficult problems for organizational theorists (see Perrow, 1979; Pfeffer, 1981), but actual organizational personnel generally have very little difficulty ranking individuals and units in their organizations in terms of "power" (Mintzberg, 1983). What is more, those rankings tend to agree closely with each other (ibid). It seems wise, therefore, to adopt for the purposes of this paper a familar and broad definition of the power concept: "power" is the capacity to affect (or effect) organizational outcomes (Mintzberg, 1983, page 4). This definition begs the controversial question of whether and how the power of a person or unit is drawn upon in organizational activities (see March, 1966). The definition does suggest (with Perrow, 1979, and Pfeffer, 1981) that power is not simply an aspect of individual interactions, however. We believe that units (e.g. academic departments) and other structural aspects of organizations can indeed have and use power.

4. A provocative discussion of information as a resource may be found in Cleveland (1984).

5. Our use of the term "legitimacy" is not meant to imply a legal basis in the argument. Instead, we use the term in the broader sense of appropriateness to the decision at hand. The issue is whether various parties accept the information as meeting informal standards for organizational decisions and action.

6. For a specific example, see Tierney (1977) on alternative interpretations of faculty work-load data.

7. Indeed, departments may in fact be able to conduct such research more efficiently and effectively than central units (see Clark, 1983, and Weick, 1978, on the benefits of loose coupling, academic autonomy, and localized scanners of external environments).

8. Of course, earlier analysts have taken note of the relevance of the "bounded rationality" literature to institutional research (see, for example, Hackman, 1983; Tetlow, 1983). The particular concern of the present paper has been less considered, however: we believe the existence of the important limitations of highly rationalized organizational models suggests the fallibility of monolithic conceptions of the institutional research function.

9. In using the term "case study," we do not intend to suggest an in-depth presentation of a chronological series of events. Instead, the focus here is on underlying themes in a particular kind of organizational change.

10. In particular, one of the authors has served in various roles at the University of Minnesota since 1953. These roles have provided that author opportunities to observe institutional research activity as it has evolved both at the all-University level and in various specific colleges (particularly the College of Education).

11. One colleague commented to us that institutional researchers were moving increasingly out of "staff" roles and into "line" roles. For example, growing numbers may be entering the domains of budget and planning analysis and decision making. In doing so, our colleague suggested, analysts may be losing some of their research independence. Some intriguing questions arise from this observation. If institutional research personnel have indeed become increasingly affiliated with important decision makers in various units, why is it happening? Is independence, at least to the extent it is actually allowed researchers in staff roles, negatively or positively related to power in the organization? Is the independence of the institutional researcher truly threatened?

12. Of course, complaints about legitimacy do not alone dictate the growth of decentralized institutional research activities, but such activities will grow if there are resources available at the decentralized level to compete with centralized research claims. The growth of microcomputer technology and availability has increased the capability of individuals and units to combat the research claims of central offices. This pattern reflects that found by Manns and March (1978). In their article on curriculum change at a major research university, they report that the most active academic departments in information-gathering and planning were those facing imposing threats to their financial resource base.

13. The establishment and staffing of a non-central institutional research office in a unit may, by itself, send an influential symbolic message, according to one of our respondents, regardless of the nature of its later activities.

14. This suggestion from our findings reflects earlier analyses of campus information and campus information systems (see, for example, Wyatt and Zeckhauser, 1975; Tetlow, 1983).

15. Some resource-rich colleges with high capabilities to conduct institutional research tended to have minimal levels of such activity, suggesting available capability must be associated with strong resource needs to become activated into on-going institutional research activity.